REMARKS

As a preliminary matter, Applicants again thank the Examiner for the allowance of claims 164-166 and 168-170.

Claims 150-151 and 154-162 again stand rejected under 35 U.S.C. 103(a) as being unpatentable over Koma (U.S. 5,608,556) in view of Hirata et al. (U.S. 5,953,093). Applicants again respectfully traverse this rejection for at least the reasons of record, and as follows. The Examiner has not established a *prima facie* case of obviousness for his proposed combination, and the cited prior art does not support the Examiner's assertions.

Section 2143.03 of the MPEP requires of the Examiner, when attempting to establish a *prima facie* case of obviousness against a claimed invention, to first cite to where in the prior art is taught or suggested each and every feature and limitation of the claimed invention. In the present case, however, the Examiner has not fulfilled this requirement. The Examiner has not cited to where in the prior art is are taught two distinct (first and second) domain regulating means, where the first substantially surrounds the second, both are protrusions or slits, and both are provided under an alignment layer. The Examiner is required to demonstrate where the prior art teaches or suggests all of these features, and not merely some of them.

First, the Examiner's assertions regarding the configuration of Fig. 6 of Koma is incorrect. Fig. 6 of Koma does not show one domain regulating means substantially surrounding another. In fact, Fig. 6 of Koma even shows only one domain regulating means, namely, the orientation control window 33a. The only other element

shown in Fig. 6 is the display electrode 17, which is not taught or suggested by Koma to be a domain regulating means. In contrast, it must be noted that the pixel electrode of the present invention is recited to be a separate and distinct element from the first and second domain regulating means.

Koma only shows two domain regulating means, as the term is recognized in the art, in Fig. 4. Fig. 4, however, shows that only the orientation control electrode 22 is under an orientation (alignment) film 23, but also that this electrode 22 is not either a protrusion or a slit, as clearly defined in claim 150 of the present invention. The only protrusion or slit taught by Koma is the orientation control window 33a, but this window 33a is nowhere taught or suggested by Koma to be located under an alignment film. Accordingly, neither "domain regulating means" cited by the Examiner in the Koma reference can read upon of the domain regulating means recited in claim 150 of the present invention.

Again, Section 2143.03 of the MPEP requires that the *prima* facie case must establish where in the prior art are shown two distinct domain regulating means, where both protrusion or slits, where one substantially surrounds the other, and both are under an alignment film. As discussed above, Koma fails to show all of these features and the Examiner's reliance on Hirata fails to make up these significant deficiencies in Koma. First, Applicants note that the Examiner has implicitly withdrawn his previous assertions that Hirata somehow discloses one domain regulating means substantially surrounding another. Hirata nowhere teaches or suggests any such features. Second, Hirata does not even teach or suggest domain regulating means provided under an

alignment film as separate and distinct from domain regulating means that *includes* an alignment film as a necessary element.

The Examiner has previously asserted that Hirata's "protrusions or slits" can function as "domain regulating means" only if the alignment film itself is included as part of the "protrusion or slit." As previously pointed out to the Examiner though, Hirata only teaches domain regulation *in the rubbing direction on the alignment film*. Without the rubbed alignment film (31e), the insulating film lines 31d, 31f cannot function as "domain regulating means" for regulating azimuths of orientations of a liquid crystal when a voltage is applied. Hirata fails to teach or suggest an additional alignment layer under which is formed both the insulating film lines 31d, 31f and alignment film 32e together. (See col. 12, lines 40-65). Accordingly, the Examiner has not demonstrated where either prior art reference teaches a domain regulating means substantially surrounding another, where both are protrusions or slits, and where both are provided under an alignment layer. Therefore, a *prima facie* case of obviousness has not been established.

Additionally, it is important to note that the Examiner has not pointed to any teaching or suggestion from either prior art reference that describes how or why the insulating film lines and rubbed alignment film of Hirata can be simply substituted for the very different orientation control electrode and orientation control window of Koma. As repeatedly pointed out to the Examiner, the two references describe different technologies that cannot be simply substituted or interchanged. Koma does not teach domain regulating means that conform at all to the configuration of the insulating film lines of

Hirata, and Hirata does not teach that its insulating film lines perform any domain regulating functions without the additional rubbed alignment layer.

More importantly, the Examiner's own previous findings prevent the Examiner from now asserting that the "protrusions or slits" from one type of technology can be substituted into an entirely difference configuration from a different technology. The original Restriction Requirement by this very Examiner, mailed June 20, 2000 (Paper No. 7 in parent Application 09/097,027, now U.S. Patent No. 6,724,452) clearly defines LCD devices that have both [domain regulating means] structures as protrusions to be "patentably distinct species" from a device where both structures are depressions, and also from devices where both are slits, or combinations of protrusions, depressions, and slits. In other words, the Examiner's own original determination -- to which he is legally bound -- estops him from now asserting that protrusions, depressions, and slits are merely interchangeable equivalents, and more particularly, that such structures in one technology are interchangeable with entirely different structures from different technologies.

Given this original determination of what constitutes patentably distinct species in the present invention, it is significant to note that the Examiner has never cited to any teaching or suggestion within either Hirata or Koma for the motivation to combine the teachings of one with the other, in spite of the numerous requests from Applicants that the Examiner do so. To establish a *prima facie* case of obviousness based on a combination of references, the Examiner is required to cite to specific teachings or suggestions within the prior art references themselves for the motivation to combine, or

else to some well-known principle in the field of art that can be objectively demonstrated on the record. Neither has ever been cited in the present case, however.

The Examiner's own original determination that the combinations of protrusions, depressions, and slits are patentably distinct from one another is even evidence in the present case that the proposed combination was not well-known in the art. Furthermore, the Koma and Hirata technologies are not interchangeable. Koma features a single slit window on one substrate opposite a shapeless orientation control electrode on the other substrate, and specifically teaches that this configuration is provided to avoid away from the well-known practice of rubbing an alignment layer. (See col. 6, lines 10-15).

Hirata, on the other hand, teaches no domain regulating means other than a rubbed alignment layer, and therefore Hirata specifically teaches away from the Examiner's proposed combination with the earlier Koma reference. Also, Hirata never teaches that the shapes formed by the patterned insulating film lines serve to regulate the azimuths or orientation of the liquid crystal. Hirata teaches "domain regulation" of the liquid crystal only by rubbing the alignment layer, a practice which Koma specifically teaches is "not necessary." Accordingly, the proposed combination is inapplicable to the present invention, and fails to establish a *prima facie* case of obviousness against the present invention.

The reliance upon Koma is even more misplaced when the specifics of how Koma's device operates are compared with those of the present invention. Koma teaches that the orientation control electrodes 22 are all connected together on the same row, and

thus all of the windows in the same row receive the same applied voltage. (See col. 6, lines 5-9; Fig. 3). Each pixel electrode 17 in the same row, however, receives its own independent applied voltage, unlike the orientation control window opposite the respective pixel electrode. Therefore, the operation of Koma's device is significantly different than the operation of the present invention, and further inapplicable against the present invention in a rejection based on obviousness.

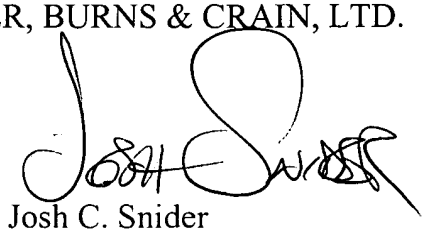
Lastly, as noted above, several of the Examiner's assertions regarding the prior art references are not supported by the references themselves. It is very confusing to Applicants to understand exactly which features of the two references the Examiner is asserting to be analogous to the recited features and limitations of the present invention. Applicants once again request, if the Examiner is not willing to withdraw the outstanding Section 103 rejection, that the Examiner must at least identify with specificity exactly what elements in both prior art references he deems analogous to each and every specific limitation in the present invention, and furthermore, that the Examiner identify exactly which elements of one prior art reference he believes can be combined with specific elements in the other reference, pointing to exact teachings or suggestions within the prior art for the motivation to make such a combination. Applicants further submit that the Examiner must justify his proposed combination in light of his earlier determination that different combinations of protrusions, depressions, and slits render such combinations patentably distinct from one another.

Applicants submit that no such further citations should be necessary, because all of the present claims are in condition for allowance over the cited references

of record. The Examiner is invited to contact the undersigned attorney, however, if a further interview would help expedite prosecution.

Respectfully submitted,

GREER, BURNS & CRAIN, LTD.

By 

Josh C. Snider
Registration No. 47,954

Customer No. 24978

July 11, 2005

300 S. Wacker Drive
Suite 2500
Chicago, Illinois 60606-6501
Telephone: (312) 360-0080
Facsimile: (312) 360-9315
P:\DOCS\2803\64683\9A4288.DOC